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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,448	10/21/2003	Malcolm Sargeant	09314.0044-00000	8087

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Washington, DC 20001-4413

EXAMINER

TRAN, HANH VAN

ART UNIT	PAPER NUMBER
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3637

MAIL DATE	DELIVERY MODE
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06/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,448

Applicant(s)

SARGEANT ET AL

Examiner

Hanh V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/21/07 & 11/20/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 and 18-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/24/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is the Final Office Action from the examiner in charge of this application in response to applicant's amendment dated 11/20/2006 and the election of Group I, claims 1-9, and 14-17 drawn to a table in applicant's response filed on 3/21/2007.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation in claim 16 of "the upper core and lower core have different thickness" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the limitation in (1) claim 15 of "the upper core and the lower core are composed of different material", (2) claim 16 of "the upper core and lower core have different thickness".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 15 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation in claim 15 of "the upper core and the lower core are composed of different material", and (2) claim 16 of "the upper core and lower core have different thickness".

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 7, 8, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7, the limitation "at least one of the group of 310, 460 and 600 mm" is of improper Markush, thus indefinite; it should be "at least one of selected from the group consisting of 310, 460 and 600 mm". Claim 8, the limitation "at least one of the group of 350mm, 300mm and 250mm" is of improper Markush, thus indefinite; it should be "at least one of selected from the group consisting of 350mm, 300mm and 250mm". Claim 15, "from the group consisting of" should be "selected from the group consisting of". Claim 16, "from the group of thicknesses consisting of" should be "selected from the group of thicknesses consisting of".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3, 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,061,541 to Gertel.

Gertel discloses an optical table comprising all the elements recited in the above listed claims including, such as shown in Fig 5, in height order: a top skin 20, an upper core 50, an intermediate skin 60, a lower core 50 and a bottom skin 30, wherein the upper and lower cores provide rigidity to the optical table, and have substantially similar

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structure, a spacer layer 40 arranged under the top skin 20 and separated from the upper core 50 by a midskin 60 providing space for peanuts.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 2, 4-9, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gertel in view of USP 5,402,734 to Galpin et al.

Gertel discloses all the elements as discussed above including the top skin, upper core, and intermediate skin form a first subassembly and the intermediate skin, lower core and bottom skin form a second subassembly. The differences being that Gertel does not disclose the intermediate skin comprising two sheets bonded together, at least one of the upper and lower cores being made of formed steel, composite material or aluminum honeycomb, the table has a thickness from top skin to bottom skin in excess of at least one of the group of 310, 460 and 600 mm, each of the

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subassemblies has a thickness less than at least one of the group of 350mm, 300mm and 250mm, a plurality of supporting legs, the upper and lower cores being composed of different material, wherein the top skin has a two dimensional grid of threaded holes.

Galpin et al disclose an optical table comprising all the elements recited in the above listed claims including, such as shown in Fig 2, in height order: a top skin 13, an upper vibration isolating core 25, an intermediate skin 23, a lower vibration isolating core 21 and a bottom skin 15, wherein the upper and lower vibration isolating cores provide rigidity to the optical table, the intermediate skin comprises two sheets (49,23,41) bonded together, a spacer layer 61 arranged under the top skin 13 and separated from the upper core 25 by a midskin, the core 25 is made of formed steel, and a plurality of legs 12 supported the table above ground, the top skin has a two dimensional grid of threaded holes, wherein the structure of the optical table facilitates easy and thorough cleaning of the portion of the tabletop exposed to the tapped holes. Therefore, it would have been obvious to modify the structure of Gertel by providing the intermediate skin comprising two sheets bonded together, at least one of the upper and lower cores being made of formed steel, a plurality of supporting legs, the upper and lower cores being composed of different material, wherein the top skin has a two dimensional grid of threaded holes in order to facilitate easy and thorough cleaning of the portion of the tabletop exposed to the tapped holes, as taught by Galpin et al, since both teach alternate conventional optical table structure, used for the same intended purpose, thereby providing structure as claimed. In regard to the core is made of composite material or aluminum honeycomb, it is well known in the optical table art to

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have the core being made of a composite material or aluminum honeycomb in order to provide structural support to the table. In regard to the thickness of the table and the subassemblies, it would have been obvious and well within the level of one skill in the art to choose different thickness of the table and the subassemblies based on the desired load support.

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gertel in view of USP 6,227,515 to Broyles.

Gertel discloses all the elements as discussed above except for the upper core and the lower core have different thickness from the group of thicknesses consisting of about 155 mm, about 230 mm, about 250 mm, and about 300 mm.

Broyles teaches the idea of providing an optical table with the upper core 27 and the lower core 60 each have a different thickness, such as shown in Fig 2, in order to provide a variable mass platform. Therefore, it would have been obvious to modify the structure of Gertel by providing the upper core and the lower core with a different thickness in order to provide a variable mass platform, as taught by Broyles, since both teach alternate conventional optical table structure, used for the same intended purpose, thereby providing structure as claimed. In regard to the thickness being selected from the group consisting of about 155 mm, about 230 mm, about 250 mm, and about 300 mm, it would have been obvious and well within the level of one skill in the art to choose different thickness based on the desired load support.

Response to Arguments

14. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh V. Tran whose telephone number is (571) 272-6868. The examiner can normally be reached on Monday-Thursday, and alternate Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HVT *HVT*
June 11, 2007

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